Pediatric Environmental Emergencies: Drowning/Near Drowning

Note Well: *Hypothermia may offer some degree of cerebral protection in a near-drowning incident, but it also increases cardiac irritability. Refractory dysrhythmias may arise during assessment and treatment. Contact Medical Control as early as possible.*

I. All Provider Levels

1. Perform a scene survey to assess environmental conditions and mechanism of illness or injury. If hazardous materials are present (such as swift water, electrical wires or confined space), contact the appropriate agency before approaching the patient. Wait for the designated specialist to secure the scene.

2. Follow general patient-care guidelines in section A1.

3. Establish patient responsiveness.

    A. If cervical spine trauma is suspected, manually stabilize the spine.

4. Check the airway.

    A. Open the airway using a head tilt chin lift if no spinal trauma is suspected, or modified jaw thrust if spinal trauma is suspected. Suction as necessary.

5. Consider placing an oropharyngeal or nasopharyngeal airway adjunct if the airway cannot be maintained with positioning.

6. Assess the patient's mental status.

7. Assess the patient's breathing including rate, auscultation, inspection, effort and adequacy of ventilation as indicated by chest rise.

    A. Obtain a pulse oximeter reading.

Pediatric Environmental Emergencies: Drowning/Near Drowning

I. All Provider Levels (continued)

8. If no breathing is present, then position the airway and start bag valve ventilations using 100% oxygen.

   A. Refer to the vital signs chart for appropriate rates.

9. If airway cannot be maintained, begin ventilations with B-V-M and initiate advanced airway management using a combi-tube.

> ***Note Well:*** *Do not use a combi-tube on a patient younger than 16 years of age or less than 5-feet tall.*

> ***Note Well:*** *The EMT-I and EMT-P should use ET intubation.*

10. If breathing is adequate, place the child in a position of comfort and administer high flow, 100% oxygen. Use a non-rebreather or blow by as tolerated.

11. Check pulse. If no pulse is present, begin CPR

> ***Note Well:*** *The EMT-I and EMT-P should follow the appropriate cardiac algorithm in addition to the guidelines in this protocol.*

12. Call for ALS support. Initiate care and do not delay transport waiting for an ALS unit.

13. Assess vital signs.

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I. All Provider Levels (continued)

14. Establish an IV of normal saline.

> ***Note Well:*** *BLS Providers cannot start an IV on a patient less than eight years of age*

> ***Note Well:*** *An ALS unit must be en route or on scene.*

> ***Note Well:*** *If IV access cannot be readily established and the child is younger than 6 years of age then ALS Providers only may proceed with IO access. If the child is over 6 years of age, then contact Medical Control for IO access.*

> ***Note Well:*** *Do Not Delay Transport to Obtain IV Access.*

15. If spinal trauma is suspected, continue manual stabilization, apply a rigid cervical collar, and immobilize the patient on a long backboard or similar device.

II. Advanced Life Support Providers

1. Initiate cardiac monitoring.

   A. Treat any arrhythmias using the appropriate cardiac algorithm.

III. Transport Decision

1. Remove wet clothing from child and cover child with warm blankets. Increase the temperature in the ambulance to warm the child and maintain the child's body temperature throughout the examination.

2. If the child's condition is unstable initiate transport.

   A. Perform focused history and detailed physical examination en route to the hospital if patient status and management of resources permit.

3. Contact medical control for additional instructions.

4. Initiate transport to the nearest appropriate facility as soon as possible.

5. Perform focused history and detailed physical exam en route to the hospital.

6. Reassess at least every 3-5 minutes, more frequently as necessary and possible.

IV. The Following Options are Available by Medical Control Only

1. IO access for patients greater than 6 years of age.

This protocol was developed and revised by Children's National Medical Center, Center for Prehospital Pediatrics, Division of Emergency Medicine and Trauma Services, Washington, D.C.